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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/811,606 | 03/20/2001 | Hiromasa Takahashi | 520.39871X00 | 3900 |
| 20457 | 7590 | 01/21/2004 | EXAMINER | |
| ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889 | | | WATKO, JULIE ANNE | |
| | | ART UNIT | | PAPER NUMBER |
| | | 2652 | | |
| DATE MAILED: 01/21/2004 | | | | |

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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/811,606 | TAKAHASHI ET AL. | |
| | Examiner | Art Unit | |
| | Julie Anne Watko | 2652 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 January 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12,15-17,19,21 and 22 is/are pending in the application.
 - 4a) Of the above claim(s) 1-12,15-17,19 and 21 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

| | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>9</u> . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Election/Restrictions

1. Amended claim 1 and its dependent claims are withdrawn from consideration as drawn to a non-elected species, Species E, drawn to Fig. 7. Newly submitted claims 21 is withdrawn from consideration as drawn to a non-elected species, Species E, drawn to Fig. 7. See especially the “granular” limitations of claims 1 and 21.
2. Claim 19 remains withdrawn from consideration. The election of species requirement was made final in paper no. 8, mailed September 5, 2003.
3. On page 20 of paper no. 11, filed January 5, 2004, Applicant refers to “linking claim 20”. It is noted by the Examiner that claim 20 has been cancelled. See page 11.

Information Disclosure Statement

4. The references listed on a sheet of paper accompanying the amendment filed January 5, 2004, have been added to the form 1449 filed September 10, 2003, and have been considered.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites the limitation “a soft magnetic oxide material” in line 9. This limitation is misdescriptive of the specification. See page 20 of the specification, which discloses alumina and silica, which are non-magnetic oxides.

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Claim 22 recites the limitation “disposed outside the same” in line 11. It is unclear to what part of the claimed product the limitation “the same” refers.

Claim 22 recites the limitation “material having as the composition elements Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Nb (niobium)” in lines 12-13. It is unclear whether the material is required to have all of the recited elements, or whether some subset of the recited elements meets the claim language.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Fontana, Jr. et al (US Pat. No. 5729410).

As recited in claim 22, to the extent understood in view of the indefiniteness rejection, Fontana, Jr. et al show a magnetoresistive sensor including a substrate, a pair of magnetic shield layers consisting of a lower magnetic shield layer and an upper magnetic shield layer (S1 and S2, respectively), a magnetoresistive sensor layer (including 116, 118, 120 and 132) disposed between the pair of magnetic shields, an electrode terminal (102, for example) for flowing a signal current perpendicular to the plane of the magneto resistive sensor layer (see arrows I in Fig. 5), and magnetic domain control layers (including 150 and 160 taken together), wherein said magnetic domain control layer disposed on opposite ends of the magnetoresistive sensor layer in the region from the end surface of the media opposed surface side of the magnetoresistive sensor layer to the depth position (see Fig. 5) comprises a layer 160 made of a material (see ¶ 13, which teaches alumina and silica, the same materials disclosed by Applicant) having high electric

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resistivity disposed in contact with opposite ends of said magnetoresistive sensor layer (see Fig. 5), and a hard magnetic layer 150, disposed outside the same, made of a metal magnetic material (CoPtCr, see ¶ 13) comprising elements selected from the group consisting of Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Nb (niobium).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (703) 305-7742. The examiner can normally be reached on Sat & Mon until 9PM, Wed & Fri until 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Julie Anne Watko
Primary Examiner
Art Unit 2652

January 15, 2004

JAW

A handwritten signature in black ink, appearing to read "JULIE ANNE WATKO". The signature is fluid and cursive, with a large, stylized initial 'J' and 'A'.